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Heritage Fund

HERITAGE PROGRAM FY2005 REPORT TO THE ARIZONA LEGISLATURE

Project Year July 1, 2004 to June 30, 2005

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ACKNOWLEDGMENTS

The assistance of personnel throughout the Arizona Game and Fish Department, and our external cooperators, in preparing this report and conducting the activities reported herein is gratefully acknowledged.

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PROJECT FUNDING

Funding for this program was provided by the Arizona Game and Fish Heritage Fund. Heritage funds were used to pursue and match funding from federal programs such as State Wildlife Grants, Section 6, Sportfish and Wildlife Restoration, and Wildlife Conservation and Restoration Program.

This Heritage Program Report to the Arizona Legislature is required under, and submitted in compliance with, Arizona Revised Statutes 17-298.G.

HERITAGE PROGRAM FY2005 REPORT TO THE ARIZONA LEGISLATURE

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Acronyms used in the Arizona Game and Fish Heritage Fund Report

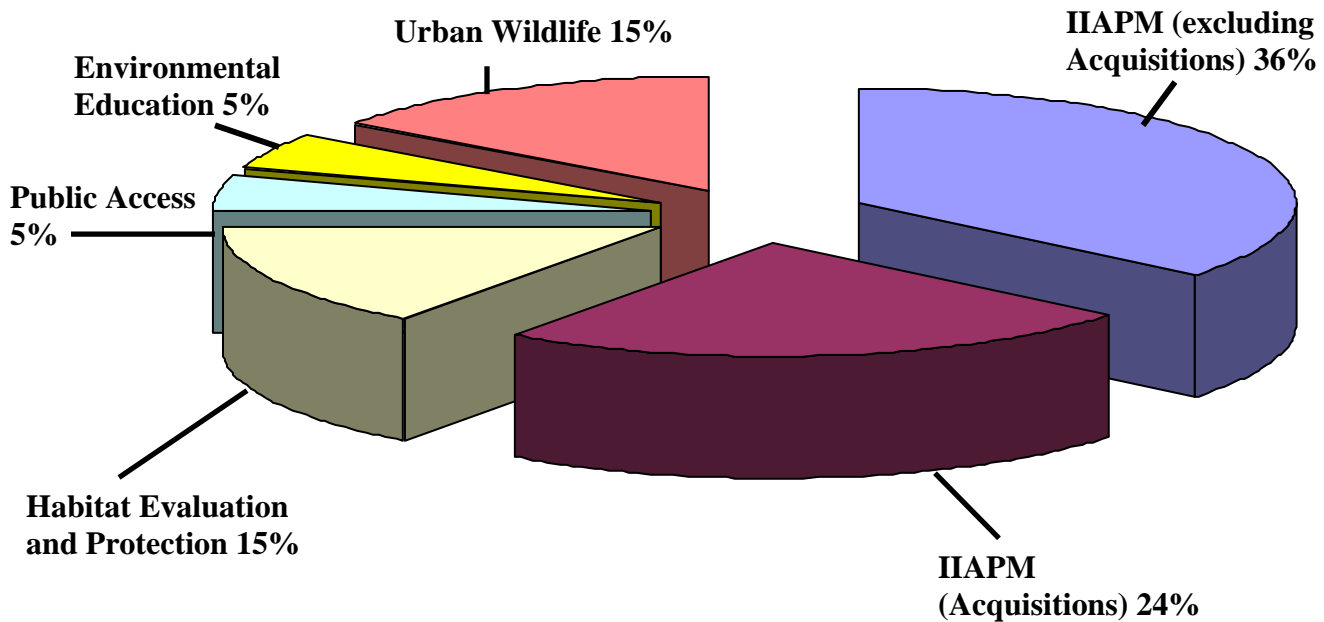
AAEE	Arizona Association of Environmental Education
AFS	American Fisheries Society
AGFD	Arizona Game and Fish Department
ASTA	Arizona Science Teachers Association
BFF	Black-footed Ferret
BLM	Bureau of Land Management
CWCS	Comprehensive Wildlife Conservation Strategy
DOD	Department of Defense
EE	Environmental Education
GIS	Geographic Information Systems
HDMS	Heritage Data Management System
HEP	Habitat Evaluation and Protection
IAFWA	International Association of Fish and Wildlife Agencies
IIAPM	Identification, Inventory, Acquisition, Protection and Management
IIAPM-FWR	IIAPM - Fish and Wildlife Research
IIAPM-LW	IIAPM - Lands and Water Administration and Acquisition
IIAPM-S	IIAPM - Stewardship
IIAPM-WM	IIAPM - Wildlife Management
LRP	Landowner Relations Program
NPR	National Public Radio
NPS	National Park Service
OGT	Operation Game Thief
PARC	Partners in Amphibian and Reptile Conservation
USDA	U.S. Department of Agriculture
WAFWA	Western Association of Fish and Wildlife Agencies
WLA	Wildlife Area

HERITAGE PROGRAM FY2005 REPORT TO THE ARIZONA LEGISLATURE

Report Period: July 1, 2004 - June 30, 2005

HERITAGE PROGRAM COMPONENT FUNDING

As established in A.R.S §17-298



NOTE: Identification, Inventory, Acquisition, Protection, and Management of Sensitive Habitat (IIAPM)

Fiscal Year 2005 Heritage Fund Revenues, Expenditures, Full-Time Employees by Subprogram.

Subprogram	FY05 Revenue¹	FY05 Revenue Percent	FY05 Expenditures²	FY05 Carry Forward (%)	Full-Time Employees
Acquisition	\$2,400,000	24%	\$3,920,000	38%	4.00
IIAPM	3,600,000	36%	5,282,242	32%	31.75
Habitat Evaluation	1,500,000	15%	2,007,518	25%	0.00 ³
Urban Wildlife	1,500,000	15%	2,540,213	41%	17.00
Environmental Education	500,000	5%	577,855	13%	5.00
Public Access	500,000	5%	621,483	20%	3.50
Interest Admin (4)	318,402	N/A	733,367	57%	14.00
Total	\$10,318,402		\$14,052,073	42%	77.25

In FY2005, the amount of funds spent from the Heritage Fund for employee personal services was \$2,734,061. In addition, \$829,429 was spent on employee related expenses.

¹ Revenue/expenditure allocated pursuant to percentages set forth in statute.

² Total expenditures include prior year unexpended revenue as authorized by the Arizona Game and Fish Commission.

³ Habitat Evaluation (HEP) staff are full-time Federal employees supported with HEP, which represents federal match funding.

⁴ Administration is funded with interest earned

SUBPROGRAM SUMMARIES OF PROJECTS, ACTIVITIES AND EXPENDITURES

IDENTIFICATION, INVENTORY, ACQUISITION, PROTECTION, AND MANAGEMENT (IIAPM) SUBPROGRAM

OVERVIEW:

Four projects are conducted in the subprogram:

- 1) Land and Water Rights Administration and Acquisition Project (IIAPM-LW)
- 2) Wildlife Management Project (IIAPM-WM)
- 3) Fish and Wildlife Research Project (IIAPM-FWR)
- 4) Stewardship Project (IIAPM-S)

Projects encompassing over 50% of IIAPM expenditures:

- Land and Water Administration and Acquisition¹: 32%
- Wildlife Management: 35%

Project Information: Administrative work was conducted at the Arizona Game and Fish Department (Department), Habitat Branch, 2221 West Greenway Road, Phoenix, Arizona 85023-4399; the Department's Regional Offices in Pinetop, Flagstaff, Kingman, Yuma, Tucson, and Mesa; and other locations as necessary. Fieldwork was conducted statewide and, as necessary, in other states.

IIAPM project activity expenditures amounted to 27% of total Heritage Fund expenditures.

PROJECTS (Summary of Activities):

1) IIAPM-LW: LAND AND WATER RIGHTS ADMINISTRATION AND ACQUISITION PROJECT

LANDS AND WATER RIGHTS ADMINISTRATION AND ACQUISITION

Objective: To protect fish and wildlife habitat through real property management, acquisition, land leases and exchanges, creation of rights-of-ways, establishment of conservation easements and development of special use agreements.

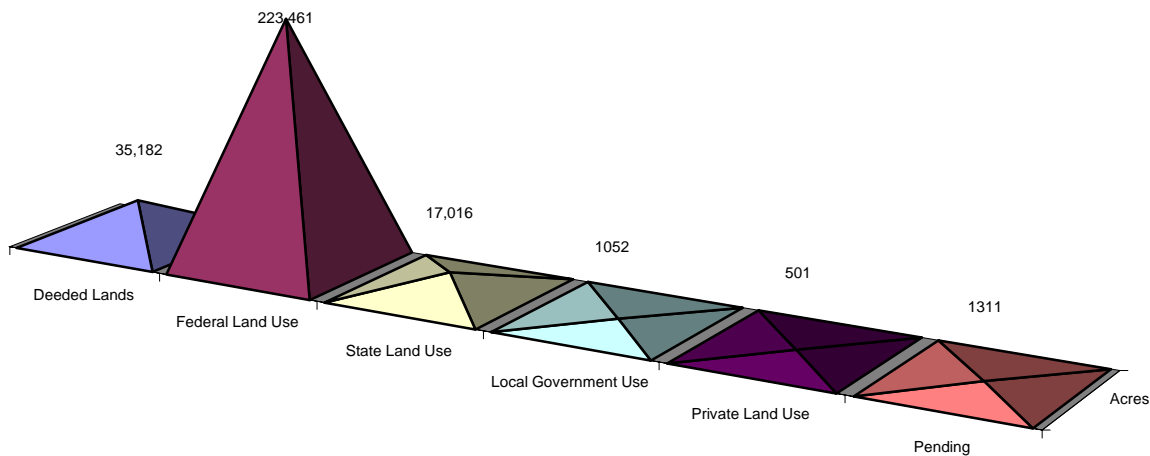
Summary of Activities:

The Department continues to evaluate and improve processes as needed to determine and monitor quality and value of wildlife habitat. The processes are used in the evaluation of potential acquisitions, accounting for appropriate laws and regulations. As of June 30, 2005, the database of properties consisted of 628 current and archive land records, increasing our portfolio by 32 records and/or documents. Of that total, 349 were active records, which included the following: 278,523 acres of land, and 3,009 acres leased by the Commission to other entities such as right-of-way agreements. In addition, the Department maintains 408 water right claims, manages 7 fish

hatcheries, 43 lakes and reservoirs, 80 wells, 58 springs, 59 retention dams or tinajas and 33 stocking ponds exceeding 3,500 surface acres of water.

Department Leased Lands	3,009 acres
Water Rights	408 claims
30 Dams/Reservoirs	3,524 surface acres

Property Database FY 2004-2005

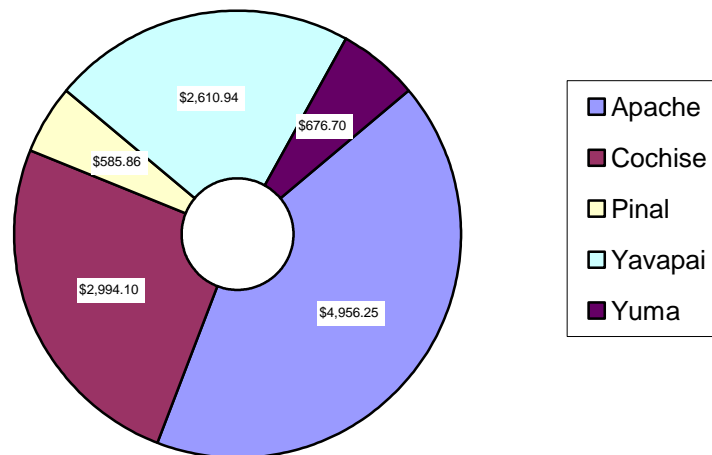


In addition, feasibility studies were conducted and coordinated on existing or new properties that were identified for protection through acquisition or land use agreements. These offers advanced through different levels of the Land Protection Evaluation Process resulting in the following: The purchase of the Coal Mine Springs property acquired a total of 2,628 deeded acres on December 21, 2004. The Commission reviewed nine property offers for potential acquisition. The Department made a preliminary review of three property offers that were not pursued further in the acquisition process as other offers received exhibited a more urgent need for wildlife conservation on a statewide level. Owners withdrew two property offers, and the Department considered four properties offered for acquisition beyond the preliminary review stage.

The Department fulfilled data requests from the Attorney General's Office in association with the Little Colorado River and Gila River adjudication proceedings. In addition, specific water right activities have occurred on the following properties: Grasslands Wildlife Area (coordinating the development of a Hydrological Assessment of the water rights, tanks, and water delivery systems), Pinetop Spring (renewal of Forest Service special use permit for land use); and Page Springs Hatchery for well abandonment and assignment. The Lands Program continues to coordinate ongoing issues associated with Commission-owned water rights.

There were no property taxes paid nor contributions made during FY2005, however \$11,823.85 was paid to five Counties as voluntary payments in lieu of taxes.

FY 2005 Voluntary Payments



LANDS OPERATION AND MAINTENANCE

Objective: To operate and maintain Heritage Fund properties at sufficient performance levels to protect investments, conserve natural resources and provide public recreation opportunities.

Summary of Activities:

Department personnel implemented numerous operation and maintenance activities for various Wildlife Areas across the State. Significant activities and accomplishments included the creation of a Little Colorado spinedace refugia with a new water filtration system, artificial stream system and modification of Pond 1 at the Grasslands Wildlife Area. Public access was enhanced with installation of a viewing platform, a kiosk with signs and picnic benches at the Becker Lake Wildlife Area. Installations and improvements to trail systems and public access roads at the Sipe, Wenima, Becker Lake, and Grasslands Wildlife Areas also increased wildlife-viewing opportunities for visitors.

Other operation and maintenance work included installation and maintenance of boundary fencing at the Sipe, Becker Lake and Coal Mine Springs Wildlife Areas. The cultivation of irrigated pastures with grass and forbs species, as well as riparian plantings such as cottonwood trees, enhanced wildlife habitat and forage at the Sipe, Wenima, Grasslands, Becker Lake and Chevelon Wildlife Areas. Elk and beaver exclosures were built, monitored and maintained at the Sipe and Becker Lake Wildlife Areas, respectively, to facilitate the riparian plantings of willows and cottonwoods. General maintenance, Wildlife Area restoration and facility improvements occurred at all Wildlife Areas.

The Grasslands Wildlife Area continued the implementation of the Department's livestock grazing plan for state lands associated with the Grassland WLA. Livestock grazing occurred on approximately 5,000 acres of the state lands controlled by the Department from November 1, 2005 to March 31, 2005.

HERITAGE DATA MANAGEMENT SYSTEM

Objective: To maintain a sensitive species management information system that facilitates storage, retrieval, updating and analysis of data gathered through inventory and other management activities.





Summary of Activities:

Element occurrence information on sensitive wildlife species and habitats was gathered from a variety of sources and entered into the Heritage Data Management System (HDMS). Information included new locations and updates on existing locations. In fiscal year 2005, 566 new records were added and 1,249 records were updated. HDMS staff maintained and updated procedures for identifying and extracting sensitive-element data from inventory, monitoring, and management projects conducted by agencies, institutions, and others.

Abstracts assisted in management planning, writing environmental documents, and making management decisions. An increased number of the abstracts were made available on the HDMS web site. In FY 2005, 39 new abstracts were written and 84 were updated and/or completely revised. These abstracts are also used to support the Comprehensive Wildlife Conservation Strategy (CWCS). Subsets were used for project evaluations and baseline data for surveys. Regional HDMS databases and desktop mapping files were updated quarterly to facilitate timely assessment of sensitive elements that might be affected by an ever-increasing number and variety of projects statewide. Refresher and orientation training on the use, limitations, and security of HDMS database subsets was also provided.

Element occurrence, abstracts, status information, and HDMS data subsets were provided to AGFD Regional Programs, U.S. Forest Service Region 3 and Ranger District Offices, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Nongame personnel, numerous private consultants, academia, and others. HDMS continues to prepare and update summaries of current information and references from scientific literature, agency reports, and knowledgeable individuals for selected special status biological elements. These products were used in Resource Management Planning, Grazing Allotment Planning, and other land management-planning activities.

The following interagency activities were conducted:

-  Provided information and distribution maps for endangered species to the Arizona State Land Department to use in fire management
-  Updated element occurrence information to Pima County for the Sonoran Desert Conservation Plan
-  Provided a data subset to the Arizona Department of Transportation to aid identification of environmental issues for maintenance activities
-  Provided technical assistance and data interpretation to the U.S. Forest Service for finalizing their Sensitive Species List

Program staff apprised current and potential cooperators of opportunities for cooperative data management, outputs, and analyses. HDMS staff trained AGFD and cooperator personnel in conventions and techniques for recording, providing, and using element occurrence and status

information. Agreements with cooperators were developed and maintained including a Memorandum of Understanding with the U.S. Forest Service, Region 3 for the sharing of sensitive species information; a Memorandum of Understanding with Nature Serve for data sharing, financial support, and technical support; and a Task Order established with the U.S. Bureau of Land Management for the exchange of information on special status species.

HDMS continued development of a web site for general information including species lists by county and watershed for special status species in Arizona. The web site, created in 2000, has been updated regularly and now contains species abstracts. More species abstracts will be added as they are written and finalized. At the end of FY 2005, there were 557 species abstracts on the HDMS web site. Statewide distribution maps were added in 2005, as well as photos or line drawings to accompany the species abstracts.

GIS was integrated into the daily management of HDMS data through the BIOTICS software being used by Heritage Programs internationally. The BIOTICS system software was updated and all patches were completed. The Program designed and produced a variety of maps in GIS format to go with many HDMS projects. We continue to upgrade our database, report writing, and mapping software to increase our productivity, efficiency and to improve product quality.

2) IIAPM-WM: WILDLIFE MANAGEMENT PROJECT

ADMINISTRATION AND COORDINATION

Objective: Provide administrative oversight for project personnel and coordinate with cooperators.

Summary of Activities:

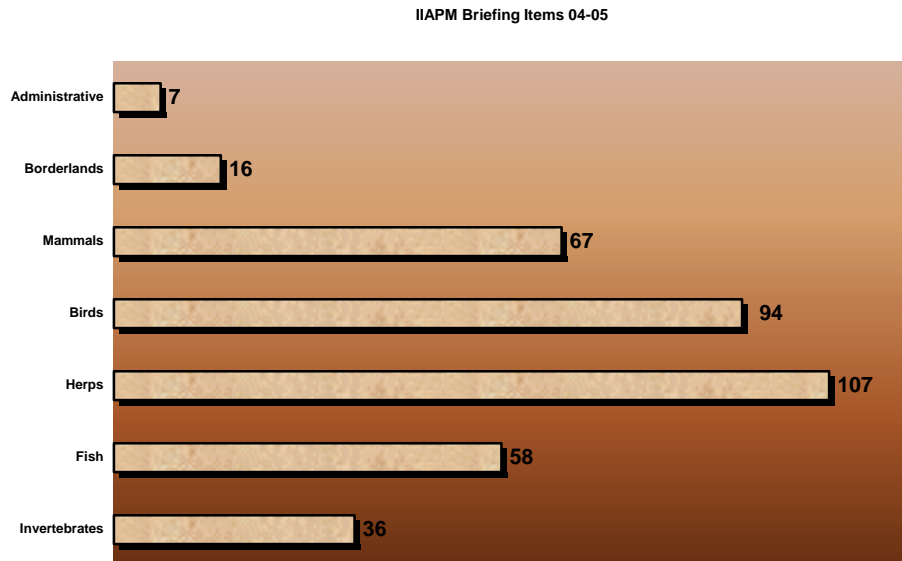
Activities were coordinated with international, national, state, county, tribal, and private entities, as well as within the Division. Specific coordination functions included chairing the following groups: Western and International Association of Fish and Wildlife Agency's Threatened and Endangered Species Committee; Executive Board of the North American Bat Partnership; Mexican Wolf Oversight Committee and Adaptive Management Work Group; Jaguar Conservation Team; and Partners in Amphibian and Reptile Conservation (PARC) support.

Relations within the conservation community were promoted by participating in meetings of the:

Arizona Audubon Society Chapters	The Nature Conservancy
Arizona Chapters of the Wildlife Society	The Tucson Herpetological Society
Grand Canyon River Guides	City and Regional Parks
Intermountain West and Sonoran Joint Ventures	Local Community Groups
Southwestern Carnivore Committee	Other Private Organizations

Updates and summaries of project activities were provided through Branch, Division, and Commission briefing items. Briefings represent an effective management tool, which offers

solid, authoritative information about activities within Programs. The wildlife management division was provided the following 385 briefing items:



The Department continued working with the Government of Mexico and the State of Sonora in various binational projects that included Sonoyta mud turtle, Sonoran Pronghorn, wild turkey, migratory birds, and jaguar. Project staff implemented the seventh Wetlands Training Course in February 2005, in Morelia, Michoacan, Mexico. The Department was again invited by the Government of Mexico to attend a special ceremony celebrating World Wetlands Day. Project staff assisted the State of Jalisco (central Mexico) in creating a state wetland conservation group similar in scope to the concept of Joint Ventures in support of the North American Waterfowl Management Plan. Project staff assisted the North American Commission for Environmental Cooperation's Conservation of Biodiversity Program to select priority activities for 2005 from the Strategic Plan for North American Cooperation in the Conservation of Biodiversity. Project staff also participated in the 2005 meeting of the U.S./Canada/Mexico Trilateral Committee for Wildlife and Ecosystem Management and Conservation in Zacatecas, Mexico.

A number of continuing education opportunities were offered to enhance internal and external cooperator skills and knowledge related to the IIAPM-WM Project. The Native Fish and Invertebrate Programs provided 7 training opportunities throughout the year. The trainings included: a Vector Control Conference, an AFS Annual Conference, Fossil Creek native fish identification, mollusk and aquatic nuisance species identification, and Wildlife Manager post-academy training. Comprehensive Wildlife Conservation Strategy (CWCS) staff provided 15 training opportunities for Department staff and cooperators in FY04-05. Training covered introduction to CWCS, landscape conservation approaches, threat assessments for northern and southern Arizona, priority species selection criteria, and designing conservation goals and actions based on threats.

The following Commission Orders affecting sensitive species-related issues were reviewed and revised where appropriate. Commission Order 13 (Other Birds and Mammals); Commission Order 14 (Predators and Furbearers); Commission Order 25 (Raptor Capture Seasons); Commission Order

40 (Fish); Commission Order 41 (Amphibians); Commission Order 42 (Crustaceans and Mollusks); Commission Order 43 (Reptiles); and other Commission Orders, as appropriate.







WILDLIFE MANAGEMENT

Objective: Manage Arizona's sensitive wildlife and sensitive habitats by conducting a full range of planning, conservation, and other management activities.

Summary of Activities:

Project staff continued to establish, evaluate, and improve data gathering and analysis protocols. During FY04-05, the Invertebrate Program staff, with the help of the Nongame Statistician and GIS Analyst, evaluated and revised project data collection and analysis protocols for the Sonoran Tiger Salamander project. Staff reviewed the standard stipulations for the various taxonomic groups and reduced review time for scientific collecting permits from an average of 5.13 days to 3.21 days. Project staff also maintained IIAPM eligibility-criteria for Department activities, external grants, and categories and lists of sensitive species, habitats, and other elements of special management significance.

Heritage funds were used to pursue and match funding from federal programs such as State Wildlife Grants, Section 6, Sportfish and Wildlife Restoration, and Wildlife Conservation and Restoration Program. Native fisheries, invertebrates, reptiles, birds and mammals across Arizona benefited from the use of "Heritage" match. Representative species assisted by match funds are:

-  Gila Chub, Gila Topminnow, Desert Pupfish, Longfin Dace, Sonoran Sucker, Apache Trout and the Little Colorado Sucker
-  Kanab Ambersnail, Page Springsnail, Three-Forks snail, San Xavier Talussnail
-  Sonoran Tiger Salamander, Barking Frog, Ramsey Canyon Leopard Frog, Chiricahua Leopard Frog
-  Flat-tailed Horned Lizard, Desert Tortoise
-  California Condor, Bald Eagle, Yellow-billed Cuckoo, Cactus Ferruginous Owl
-  Mexican Wolf, Black-Footed Ferret, Bats, Black-Tailed Prairie Dog, Jaguar and Sonoran Pronghorn

Division staff completed preparation of the Arizona Breeding Bird Atlas manuscript for final publication. Efforts included the compilation and analysis of atlas data to determine the general distribution of 270+ species of breeding birds in Arizona. Distribution maps, breeding phenology graphs, and species accounts containing information on habitat, breeding, distribution, and status were written and created for each species. The prepared manuscript was submitted to the copy editor for final editing prior to submittal to the lay out and design artist.

Fourteen projects were funded around the state that addressed all the priorities within the Arizona Bird Conservation Initiative: habitat enhancement and restoration, inventory and monitoring, research, and public outreach and education. These projects assisted with the conservation of over 18,800 acres of bird habitat, and reached over 11,000 people through the production of brochures and location of signage within project areas.

High-status Species Activities:

- FY2005 marked the 8th year of California condor reintroduction activities. As of December 2004, 73 condors had been released in Arizona and of these, 25 have perished. There are 46 free-flying condors in Arizona's population and 14 awaiting release beginning in February 2005. Over 30% of Arizona's condor population is of potential breeding age (6-8 years old). In the summer of 2004, biologists visually confirmed two wild condor chicks in Arizona. One nest was in Grand Canyon National Park, the other on the Vermilion Cliffs. Both chicks successfully fledged in November 2004.

Project activities included the release of juvenile condors; monitoring daily movements, foraging behavior and breeding attempts; conducting routine health checks; treating birds with high blood lead levels; participating on a committee formed by the USFWS to reduce exposure to lead by condors; implementing approved lead awareness recommendations; attending Southwest Condor Working Group and California Condor Recovery Team Meetings and conducting public outreach. Bird field surveys and management activities were also conducted for bald eagle, black rail, Yuma clapper rail, cactus ferruginous pygmy owl, peregrine falcon, southwestern willow flycatcher, yellow-billed cuckoo, and Mexican spotted owl.

- Black-footed ferret (BFF) project staff completed 384 transects to determine prairie dog burrow densities across 64 transect blocks. It was estimated that the Aubrey Valley could sustain 94 black-footed ferret families. This is up 65 families from 2002. Formal spotlight surveys were conducted in blocks of consecutive nights from June to December 2004. Incidental surveys occurred throughout the year. There were 1,145 person-hours of spotlighting, including 92 hours of backpack surveying. One hundred and ten ferrets were observed. In 2004, the same numbers of BFF were seen in roughly half the amount of time spent spotlighting. This recent trend would indicate the number of BFF in the Aubrey Valley has increased.

- Mexican wolf activities included more releases and monitoring efforts. Specific actions used by the reintroduction effort included radio-telemetry, field team coordination and supervision, outreach, road-kill collection, landowner contact, reporting, and data entry. A pack of five wolves was released in July 2004. Department aircraft were supplied for weekly telemetry flights. Up to ten packs of wolves were monitored by the field team. Reproduction in the wild was once again documented during FY2005. Other mammal field survey and management activities were conducted for bats, Hualapai Mexican vole, jaguar, jaguarundi, Mount Graham red squirrel, ocelot, Sonoran pronghorn, and black-tailed prairie dog.

INFORMATION MANAGEMENT SYSTEMS

Objective: Maintain manual and computerized sensitive wildlife and sensitive habitat information.

Summary of Activities:

Computerized databases and files were maintained for many nongame species and projects including the frog head-starting program, bat box monitoring, wolf aerial locations, wolf

population status, and miscellaneous wildlife sightings; for all sensitive species observed during the ranid frogs project surveys, particularly amphibians and reptiles. All program areas submitted new and updated sensitive element occurrence information to HDMS for processing.

Digital images and 35-mm photographs were developed and archived of many different species, their habitats, and significant project activities for use in technical presentations, publications, and education/outreach programs.

OUTREACH

Objective: Increase program awareness and support by informing and educating the public, cooperators, and others about project-related issues, including wildlife conservation and management, wildlife-based recreation, and related topics.

Summary of Activities:

Articles and technical reports were produced on a variety of species and topics for publication in scientific and other journals. Presentations to the public and to professional audiences were made at the following: the Desert Tortoise Council; Glendale Community College; National Turtle and Tortoise Society; Boyce-Thompson Arboretum; West Texas A&M University; Oklahoma Herpetological Society; Sonoran Desert III, Annual Meeting of the Society for the Study of Amphibians and Reptiles; WAFWA T&E Committee; Black-footed Ferret Recovery Implementation Team; Jaguar Conservation Team; Mesa Southwest Museum; and several schools and parks.

Staff prepared and published Nongame Endangered Wildlife Program Technical Reports on a variety of species and published four *Wildlife Field Notes* articles. Seven species accounts were authored in a book on conservation of amphibians in the United States. All were published in June 2005. Four articles were published in peer-reviewed publications; 3 articles are “in press,” and 2 are in preparation or have been submitted for publication.

The project maintained the Arizona Bat Resource Group quarterly newsletter and contributed to the book *Conservation and Management of Prairie dogs*, which is in press with Island Press. Staff provided articles, press releases and television interviews as a result of the July salvage of Gila chub from Sabino Canyon and a NPR interview regarding Gila chub salvage and a fish kill in the Salt River resulting from fires in the southwest. In addition, Staff provided interviews for 12 newspaper articles, 2 radio and 5 television segments for stories related to desert tortoise, Tarahumara and Chiricahua leopard frog releases; and a monsoon breeding amphibian feature. Newspaper and television interviews were also provided in association with the free-tailed bat roost located at the Maricopa County Flood Control tunnel.

3) IAPM-FWR: FISH AND WILDLIFE RESEARCH PROJECT

WILDLIFE AND FISHERIES RESEARCH

Objective: To collect information on sensitive wildlife species to aid in conservation efforts to ensure these species are maintained as viable components of Arizona’s diverse wildlife assemblage.

Summary of Activities:

The Department, in cooperation with the Bureau of Land Management and Northern Arizona University, is conducting research on wildlife responses to forest restoration on Mt. Trumbull in Northern Arizona. During FY2005, fieldwork continued as scheduled and included the installation of 25 pitfall arrays on Mt. Trumbull to assess reptile responses to restoration treatments. Captured lizards were aged, sexed, and marked prior to release.

Completion of Mt. Trumbull research was delayed because of drought and concomitant fire risk, and the difficulty of small timber harvest necessary for completing the treatments prior to post-treatment data collection. Control and transition data will continue to be collected, and post-treatment activity was initiated in FY 2005.









Fiscal year 2005 saw the initiation of a Cooperative Agreement with Northern Arizona University to conduct research on effective design of pinyon-juniper habitat to benefit Pronghorn and other grassland obligate species. Further research on the Sonoran Pronghorn antelope in Mexico was completed with the cooperation of multiple program contributors. A record number of antelope were observed during the biennial range-wide Sonoran Pronghorn surveys in Mexico.




4) IIAPM-S: STEWARDSHIP PROJECT

LANDS STEWARDSHIP

Objective: Implement compatible projects and agreements on public and private lands to enhance, protect and restore sensitive habitats for species at risk.

Summary of Activities:

-  Silver Creek Hatchery: Continuation of project in the Pinetop region to exclude livestock from riparian areas and provide alternative watering sources.
-  Meen Farm: Planting of native grasses on former cropland to benefit grassland dependent species in Tucson.
-  Little Horse Ranch: Assisted in the construction of livestock/elk proof fence in Flagstaff to protect a riparian area and wet meadow.
-  Campomucho Sacaton Project: Conducted grassland enhancement projects on several thousand acres of native rangeland in Tucson.
-  Arizona Electric: Constructed artificial burrowing owl burrows on electric company lands in Tucson. Burrowing owls displaced by urban expansion were relocated to site.
-  Birdland Ranch: Agreement in Tucson facilitated the installation of fencing of watering areas to exclude cattle and reseeding of abandoned roads.
-  Lewis farm: Conducted a prescribed burn and reseeded abandoned cropland with native grasses.
-  Bar O Ranch: Funds were matched against USDA funds to purchase a 2,200-acre conservation easement in Tucson.

-  Homack Ranch: Modified fencing on ranch to allow for passage of pronghorn antelope near Bonita.
-  Anderson Property: Renovated a pond close to the town of Portal in order to establish native fish refugia.
-  47 Ranch: Conducted grassland restoration on the ranch near Tombstone to benefit grassland dependent species.

HABITAT EVALUATION AND PROTECTION SUBPROGRAM

OVERVIEW:

Project information: Administrative work was conducted at the Arizona Game and Fish Department, Habitat Branch, 2221 West Greenway Road, Phoenix, Arizona 85023-4399; the Department's Regional Offices in Pinetop, Flagstaff, Kingman, Yuma, Tucson, and Mesa; and other locations statewide; and at the national level, as needed.

Habitat Evaluation and Protection project activity expenditures amounted to 12.5% of total Heritage Fund expenditures.

PROJECTS (Summary of Activities):

HABITAT EVALUATION AND PROTECTION PROJECT

HABITAT EVALUATION AND PROTECTION

Objectives: Incorporate fish and wildlife resource needs or features in land and water development projects and land and water management planning efforts in Arizona. Ensure habitat protection through environmental compliance and regulation, and to monitor the implementation and effectiveness of mitigation commitments for various land and water development projects and management planning activities in Arizona.

Summary of Activities:








Data from wildlife surveys, habitat evaluations, and existing sources was acquired for use in biological reviews. As an ongoing activity, biological resource data was assimilated from existing references and other sources, such as the department Geographic Information System and Heritage Data Management System. Staff worked with federal, state and local agencies and organizations on wildlife and wildlife habitat issues. In addition, staff was involved with habitat projects, land and resource planning issues on National Monuments, Wilderness Areas, and the Governor's Forest Health Advisory Committee.

Implementation of the Herbaceous Forage Monitoring Program continued in all Game Management Units that contained National Forest lands in the Department's Pinetop Region. The monitoring protocol involves early and late season monitoring of herbaceous forage utilization by wild ungulates in key areas excluded from livestock grazing. Monitoring data is then incorporated into the Region's annual hunt recommendation process. The Department

supervises the Herbaceous Forage Monitoring Program, ensuring implementation consistency across the region, providing guidance and assistance during monitoring, summarizing and compiling annual data, and maintaining the regional monitoring database.

Work continued with the Forest Service and other federal, state and local agencies on Forest Health and Forest Restoration planning during the project year. There continues to be a critical need to develop a long-term forest restoration program that reduces the threat of catastrophic wildfire within the urban interface and forested wildlands in Arizona. Although biologists have gained considerable biological knowledge during that time, the Department believes it is important to acknowledge that gaps exist in the current scientific knowledge as to the effects of forest restoration on Arizona's fish and wildlife resources. Efforts focused on developing wildlife-based monitoring and research programs to better understand the affects of forest restoration to wildlife, and incorporating an adaptive management approach into the planning and implementation process.

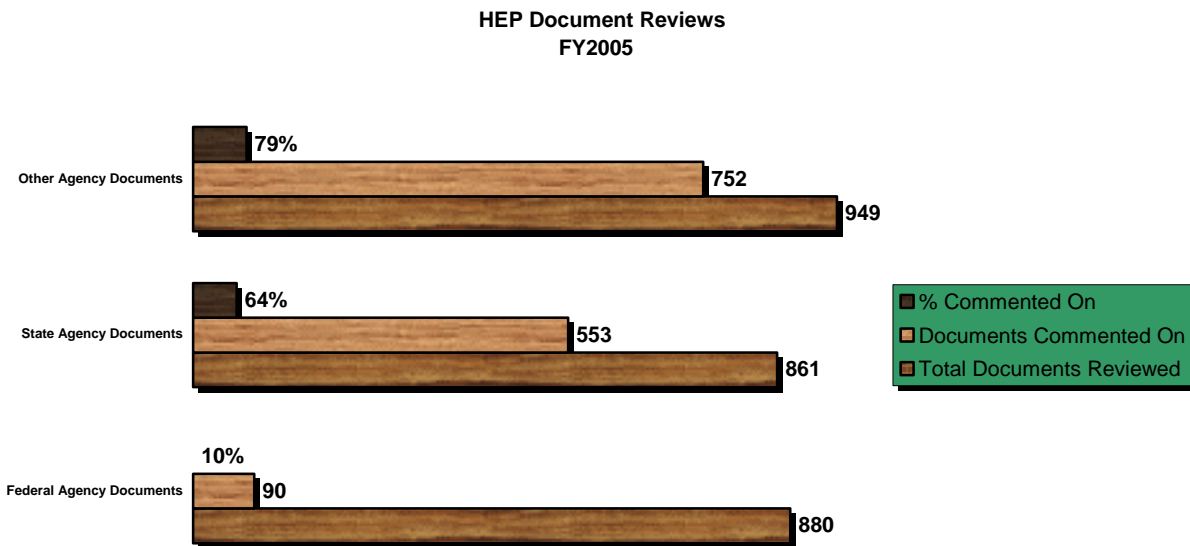
Program personnel developed and planned habitat projects and documents with inter and intra-agency cooperative groups. Updates and summaries of project activities were provided through Branch, Division, and Commission briefing items. Specific actions included the following:

-  Involvement with the Rio Salado Environmental Restoration Project developing planning documents to restore and/or create habitats once found along the Salt River
-  Active participation on the Tres Rios River Management Plan Steering Committee. This effort is directed at planning for issues associated with discharge of municipal effluent from the City of Phoenix 91st Avenue Wastewater Treatment Plant into the Salt River
-  Worked with the City to restore wildlife-related viewing access to the wastewater treatment ponds
-  Received and completed 40 Environmental Assessment Checklists from other Department work units during FY2005
-  Coordinated AGFD and IAFWA comments and input regarding the USFS new Rule that will guide land and resource management planning on USFS lands during the project year
-  Worked with the federal land management agencies on habitat projects and land and resource planning issues (e.g., proposed federal legislation, policies, projects and draft management plans)
-  Reviewed and participated in the development of several federal land management policies, land and resource management plans and special land designations, such as new National Monuments and Conservation Areas. Federal agencies involved included U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), Department of Defense (DOD), U.S.D.A. Forest Service (USFS), and National Park Service (NPS)

A considerable amount of time was spent working with Regional Habitat Programs, other state wildlife agencies, and the International Association of Fish and Wildlife Agency (IAFWA) in the review of significant USFS proposals. Work continued on the proposal for protecting the remaining USFS road less areas as directed by President Clinton during the 1999-2000 project year. Of the 1,116,000 acres of USFS inventoried road less areas in Arizona, this proposal will

impact about 400,000 acres of unroaded USFS lands where there are currently no special restrictions/limitations regarding road construction and reconstruction activities. The Program is currently working with the Governor's Office to develop a petition to the Secretary of Agriculture regarding Arizona's desire for future management of these areas.

The Habitat Program received 2,690 documents from various state and federal agencies, cities, counties, and private sources. High expectations associated with program effort and support (internal and external) and more interaction with Regional Habitat Programs have required an increased focus on process improvement and project prioritization so more time is spent on proposed actions with the most impact on Arizona's fish and wildlife resources. Of these, 1,395 documents were reviewed and required Department review and comments (see Appendix I).



GEOGRAPHICAL INFORMATION SYSTEM (GIS)

Objective: To provide a Geographic Information System (GIS) for Department use as an effective natural resource data management tool in support of the Department's mission and functions.

Summary of Activities:

Development of digital data and providing Geographical Information System (GIS) services constituted the largest workload of the GIS program. Products come in many forms: maps of areas meeting specified criteria, databases, statistics, spatial analyses, meeting presentation graphics, publication or report graphics. As described above, use of GIS has become an essential tool of Department professionals in the accomplishment of their goals in support of the Department mission, and an integral part of many programs. Benefits include the ability to correlate and discern relationships between data, more informed management decisions, and the ability to display spatial data relationships in a meaningful way. GIS permits management decisions based on analyses and information derived from spatial data, not possible without the capabilities of GIS tools.

Support was provided to the Department by assisting with lands acquisitions and management, including shooting range development. Other primary areas of GIS support included wildlife

management, data development, the Public Access Program, and Information and Education applications.

An important component of GIS support is to work closely with users to determine GIS applicability and capabilities in support of program objectives. For all GIS user support activities requested, GIS Program staff coordinated closely with users to ensure that program and project objectives were met. In order to ensure the smooth integration of GIS into the program objectives, personnel throughout the agency worked together to improve communications on coordination of GIS resources and activities and to make efficient use of GIS computer system resources.

URBAN WILDLIFE SUBPROGRAM

OVERVIEW:

Projects encompassing over 50% of Urban Wildlife expenditures:

- Wildlife Management/Wildlife and Human Interactions/Habitat and Recreation¹: 42%
- Education and Information: 37%

Project information: Administrative work was conducted at the Arizona Game and Fish Department, Game Branch, 2221 West Greenway Road, Phoenix, Arizona 85023-4399; the Department's Regional Offices in Pinetop, Flagstaff, Kingman, Yuma, Tucson, and Mesa; and other locations statewide, as necessary.

The Urban Wildlife project activity expenditures amounted to 15.3% of total Heritage Fund expenditures.

PROJECTS (Summary of Activities):

URBAN WILDLIFE AND URBAN WILDLIFE HABITAT PROJECT








URBAN WILDLIFE MANAGEMENT

Objectives: Develop the biological and social information needed to support sound management and conservation of urban wildlife and urban wildlife habitat, to support environmental review and management of wildlife resources in urban settings. Provide financial assistance through grants and contracts to agencies, local governments, organizations, and universities to support the conservation of wildlife and wildlife habitats and to promote wildlife-related recreation and education in urban environments.

Summary of Activities:

The Division was very active with inter and intra-agency cooperative groups. Personnel were involved in the following groups:

¹ The three programs were combined for purposes of reporting expenditure information because the activities all have common characteristics.

-  Collaborated with statewide Urban Wildlife Program assessment and restructure proposal
-  Provided conflict resolution training for county animal control officers
-  Contributed to the AGFD Action Plan for Minimizing and Responding to Lion/Human Interactions
-  Oriented new Wildlife Managers
-  Supported Tucson Electric Power and University of Arizona electrocution monitoring
-  Gave technical assistance to local governments with road kills, wildlife crossings, park and corridor development and bat use of bridges
-  Outreach to rehabilitators regarding disease, deliveries and release sites

Urban Wildlife supported the Urban Heritage grant process. Involvement included promoting the program in regional areas, assistance with grants workshops, answering questions from applicants, review of proposals and inspection/review of projects for contractual compliance.

Urban development increasingly impacts wild lands that were once distant from human population centers. Surveys are one method used to measure the impact of urban sprawl. Various surveys conducted in FY 2005 include:

Survey/Research	Area
Desert Tortoise Surveys	Metropolitan Tucson Area and adjacent undeveloped areas
Javelina release and rehabilitation studies	Tucson and Mesa Areas and adjacent undeveloped areas
Cactus Ferruginous Pygmy owl surveys and bats	Their respective potential habitats
Yuma clapper rail and Southwest willow flycatcher surveys	Greater Phoenix area





Another measure of urban development impact is participation in programs like the Urban Raptor Nest Monitoring and Foster Project. This is an ongoing project to locate and monitor as many urban raptor nests as possible. Objectives include preventing raptor electrocutions by providing nest location data to power companies so that they may prioritize power line insulation; sharing nest location information with University of Arizona researchers studying the extent of electrocution and efficacy of bird guard on power poles; and finding suitable nests for fostering injured and orphaned nestling and fledgling raptors to reduce the number that are hand-raised by wildlife rehabilitators. Information gathered in FY2005 has been specifically used to re-nest or foster great-horned owls, barn owls, burrowing owls, Harris's hawks and Cooper's hawks.

URBAN WILDLIFE AND HUMAN INTERACTIONS

Objectives: Assist with resolving conflicts between humans and wildlife in urban settings. Provide information to the public that enhances public awareness and understanding of urban wildlife issues and the Department's activities related to those issues. Foster wildlife rehabilitation efforts from volunteers in the community that are consistent with restoration and protection of Arizona's wildlife resources.





Summary of Activities:

The Department responds to the community and assists as appropriate to find solutions to wildlife-related problems such as property damage, noise, and safety concerns. Personnel coordinated with the following cooperative groups:

-  Recommendation evaluation of coyote conflict resolution protocols and methods with California Fish and Game Department, the City of Portland, the cities of Phoenix, Scottsdale, Sun City and Peoria
-  Information about nuisance wildlife policies and respective roles and responsibilities to local law enforcement
-  Offered technical assistance and clarification of jurisdiction on urban wildlife issues with the USDA Wildlife Service
-  Assisted the Phoenix Water Department with a serious cliff swallow concern at two water treatment plants

Urban Wildlife and Human Interaction personnel addressed many concerns throughout FY 2005 including a community petition to the Governor about nuisance javelina. The Governor and other officials were kept apprised of the progress toward resolution. Homeowners were regularly assisted with urban wildlife conflicts by contacting and making recommendations of tolerance and self-help/wildlife control contracting.

Personnel collaborated on the development of several statewide public relations campaigns. One campaign highlighted mountain lion conflicts. A statewide effort to pass a 'no feeding' wildlife law was promoted through the development and purchase of television time for a Public Service Announcement "Don't Feed the Wildlife" as well as signage in parks and nature areas. A third area focused on community awareness training, which covered urban wildlife, habitat, conflicts, and other wildlife issues. Training was offered at the following locations as well as many more:

-  Grayhawk, Whisper Rock and Scottsdale Ranch Homeowners Associations
-  Phoenix Mountain Preserve Council
-  Pebble Creek
-  McDowell Mountain Stewardship classes at the Scottsdale Community College

The Division assisted communities with various wildlife conflict resolution concerns such as wildlife unable to leave residential areas or who were chronic nuisances. Specific concerns addressed included: *coyotes* in the Sun City area, Scottsdale and Peoria; *mountain lions* reported in Globe, Apache Junction, Gold Canyon and North Mesa; *javelina* in Tempe, Scottsdale and North

Phoenix. Outreach was an important part of personnel efforts. In order to have a broader impact in communities, a volunteer program was developed to give talks to various groups and the public about co-existing with urban wildlife. The Department trained 24 volunteers in FY 2005.

URBAN HABITAT AND RECREATION

Objectives: Facilitate protection, restoration, and enhancement of native terrestrial and aquatic wildlife habitats in urban areas. Support conservation, restoration and enhancement of habitats of value to wildlife in urban settings, and develop and maintain local wildlife-related recreational opportunities for residents of urban communities.

Summary of Activities:

Cooperation with agencies, local governments, private property owners and organizations continued in order to develop and enhance wildlife-related recreational opportunities in urban areas. The project promoted recreational opportunities for wildlife watching and urban fishing. This included providing advice on design, habitat, management issues and opportunities for the Riparian Preserve at water treatment plants in Gilbert, the Rio Salado restoration project, The Point at the Squaw Peak community and the McDowell Sonoran Preserve.

Selection, coordination, management and implementation of these projects required extensive cooperation and communication with over 30 park staff. Partnering on these projects fostered closer ties and support, and generated greater appreciation of the Department's commitment to helping cities manage their parks and lakes and provide quality-fishing recreation.

Steele Indian School Park Pond, a 2.5-acre lake in the City of Phoenix, was added to the list of designated Urban Fishing waters on January 1, 2005. There are now 20 lakes in 11 municipalities participating in the Arizona Urban Fishing Program. Proactive strategies and approaches are being used to include more waters in the Program in the future. Meetings and discussions were held with representatives of three new lake projects that could become part of the Urban Program in the next two years.

Two lake habitat improvement projects were completed in cooperation with the Boy Scouts of America. One project included plastic mesh nursery cages to encourage bass and bluegill fry survival and recruitment. Nine structures were placed in Red Mountain Lake; six were placed in Canal Pond, and ten in Chaparral Lake. Another project at Canal Pond included the installation of bass bungalows (bundled wooden pallets anchored by concrete-filled tires) and catfish condos (bundled sections of ribbed plastic pipe). Program personnel assisted with the coordination and installation of habitat for a total of 16 bass bungalows and 12 catfish condos in this 3-acre lake. Rock reef habitat was installed at Kiwanis Lake, Chaparral Lake, Papago Pond, Desert Breeze Lake, and Riverview Lake.

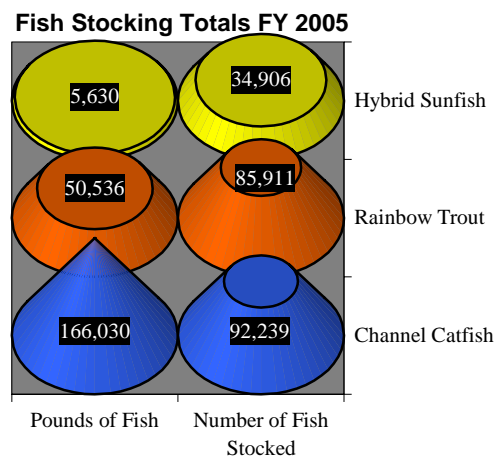
The Division was involved in the coordination and fish stocking arrangements for nine clinics this year. Special orders of catfish, trout and hybrid sunfish were arranged for the Fishing in the Park event at Tempe Papago Park in October, the Ultimate Outdoor Experience in March, the Kiwanis Kid's Fishing Festival in April, three clinics on Free Fishing Day in June, and three other clinics.

Personnel participated in numerous outreach activities including the second annual Tres Rios Nature Festival in Phoenix, the Tempe Picnic in the Park, Arizona State Fair, Hunting and Fishing Showcase and Tempe Town Lake clinic in November, the Ultimate Outdoor Experience in March and two smaller fishing clinic events. Of the 7 clinics held statewide on Free Fishing Day, 4 were at Urban Fishing Program lakes in the Phoenix and Tucson areas.

A new challenge surfaced in Arizona at Water Ranch Lake in Gilbert. In January 2005, a significant fish kill was reported and observed that included trout, bass, bluegill, catfish and carp. Program staff led the investigation of the water quality and other possible fish kill causes. Department Water Quality staff identified and confirmed the presence of the golden alga, *Prymnesium parvum*, in the lake. This incident represented the first confirmed finding of golden alga in Arizona that resulted in a fish kill. Program staff researched all available information on *P. parvum*, and developed a Department four-page Frequently Asked Question document for distribution and inclusion on the Department web page. Information was also shared with other key agencies and area lake management consulting companies.

A comprehensive roving creel survey was initiated on January 1, 2005 and continues through December 31, 2005. Program surveys are conducted at five-year intervals to gather program data on angler use, catch rates, satisfaction, demographics, economics and other vital information to assess Program performance and evaluate and modify management strategies. Surveys are conducted using a stratified random sampling based on day of week, time of day and days following stocking. The study target is 4,500 completed surveys.

In FY 2005, program personnel coordinated and oversaw the stocking of 92,239 catchable channel catfish, 85,911 catchable rainbow trout, and 34,906 hybrid sunfish at Program lakes. Most lakes received 24 stockings each during the year for a total of 423 supervised stockings.



URBAN LAW ENFORCEMENT AND PROTECTION

Objective: Protect urban wildlife populations, habitats and public safety by assuring compliance

with state and federal law.

Summary of Activities:

Department officers conducted 3,635 hours of urban law enforcement during FY 2005. During this effort officers contacted approximately 1,700 hunters in the metropolitan (metro) units; comparatively 1,300 hunters were checked last year in the metro units. Compliance rates for hunters in metro units were approximately 90%, slightly higher than recorded for last year. Urban enforcement efforts resulted in 328 citations issued for offenses in the metropolitan units. Officers contacted approximately 795 anglers at Urban Lakes; this effort was only 23% of last year. The compliance rate for anglers at Urban Lakes was approximately 90%, the same as recorded for last year.

Enforcement presence was provided for hunts in the Tucson area with emphasis on Tucson Mountain Park and rural interfaces where hunters may infringe upon private property rights. Safety issues and concerns were targeted. Officers while on patrol distributed Game Ranger cards during the archery deer and dove seasons.

In the Tucson area, 368 special use permits were issued with only two complaints received in the regional office concerning trespass or hunting within close proximity to homes. The City of Marana and the City of Tucson have annexed multiple sections of private land thus decreasing hunting opportunities for dove, small game and archery deer. Special patrols were organized to maintain current access into public land that was affected by the recent land acquisitions. The City of Vail continued to annex land resulting in landowner complaints of hunters within close proximity to homes and livestock. Patrol effort was focused in this area in order to ensure compliance with trespass and Title 17 laws.

Law enforcement support was provided for the Operation Game Thief (OGT) and investigation efforts originating from or terminating in urban areas. There were 89 OGT calls received by the Department during this fiscal year that involved the metropolitan units. Urban enforcement efforts resulted in 415 citations issued for offenses in the metropolitan units. The breakdown by nature of the OGT calls follows:

Big Game	14
Small Game	2
Migratory Birds	36
Aquatic Wildlife	13
Raptors	6
Reptiles	5
Other Wildlife	6
Misc. Title 17	7





URBAN EDUCATION AND INFORMATION

Objectives: Implement annual marketing plans for all agency programs. Achieve customer satisfaction and agency recognition targets established by program for products and services. Increase participation of culturally diverse people in agency programs. Achieve increase in the

public's skills, enjoyment and safety in the pursuit of programmatic and recreational activities.

Summary of Activities:

Urban Information and Education personnel coordinate a number of programs that help thousands of people each year enjoy the outdoors. Together, these educational programs and outreach efforts promote the protection, management and wise and enjoyable use of our fish, wildlife and other natural resources.

-  ListServ was used to provide interested participants with relevant wildlife information.
-  Provided resources and stories for television shows, *Arizona Wildlife Views*, and other print media.
-  Frequently highlighted the Adobe Mountain Wildlife Center. The Center's Coordinator worked closely with Department staff and external media to accommodate the agency's need to disseminate information to the public.
-  Disseminated information through written articles, public presentations, informational displays, videos, television, radio, and print media outlets.

Informational materials were published and disseminated, instructing the public on procedures for dealing with wildlife in its habitat, handling orphaned/injured wildlife, and the rehabilitation of wildlife. Materials from previous years were reprinted as needed, and information was added to the AGFD website.

Department staff participated in wildlife fairs throughout the state and other events including the Bowhunters Happening, Verde River Birding Festival, Wings Over Wilcox, Boyce Thompson "Buzzard Days", Tres Rios Birding and Nature Festival, Yuma Birding and Nature Festival, and Southwest Wings. The Department provided support for the Arizona Watchable Wildlife Tourism Association, and 4 birding and nature festivals.

ENVIRONMENTAL EDUCATION SUBPROGRAM

OVERVIEW:

Project information: Administrative work was conducted at the Arizona Game and Fish Department, Environmental Education Branch, 2221 West Greenway Road, Phoenix, Arizona 85023-4399; the Department's Regional Offices in Pinetop, Flagstaff, Kingman, Yuma, Tucson, and Mesa; and other statewide locations, as necessary. Fieldwork was conducted statewide and, as necessary, in other states.

Environmental Education project activity expenditures amounted to 4% of total Heritage Fund expenditures.

PROJECTS (Summary of Activities):

ENVIRONMENTAL EDUCATION PROJECT









ENVIRONMENTAL EDUCATION AND INFORMATION

Objectives: Provide diverse educational programs to increase public awareness, appreciation, and understanding of the Mission and Heritage activities of the Commission and Department.

Summary of Activities:

Evaluation and improvement processes were used to determine and monitor quality and value of the Department's environmental education and information programs. A variety of classroom materials was developed and implemented including a new literacy program "Focus: WILD Arizona". Focus WILD uses the web as the major method of delivery to educators and students. Plans and templates were developed to provide web-based dissemination of information effective with the 2005-06 school year. Promotion and implementation included giving 50 Focus WILD workshops held throughout the state, with 991 pre- and in-service educator participants.

The Program sought to increase community involvement by providing opportunities for individuals and groups to contribute to the recovery, preservation, and study of Arizona's ecology. Education and information resources were promoted to citizens concerning the value of natural desert habitats, native biodiversity, and their importance to humankind. Activities that supported these goals are listed below:

-  Utilized electronic list serves as basis for disseminating information to those enrolling in our programs.
-  7000 copies of Arizona Wildlife Views distributed to Wildlife Building visitors during the 2004 AZ State Fair.
-  Issues of *WILD in Arizona*, *WILD Water Wonders*, and *Here Today – Gone Tomorrow?* Student tabloids were distributed at the state fair, six water festivals held statewide (in partnership with Project WET), five birding and nature festivals (Yuma, Tres Rios, Wings Over Willcox, Verde Valley, and Southwest Wings), regional wildlife fairs, and other public events.
-  Educational resource materials were provided to participants attending the Arizona Science Teachers Association (ASTA) and Arizona Association for Environmental Education (AAEE) conferences and the Arizona Science Museum Educators Evening.
-  Technical assistance was made available to EE and Schoolyard Heritage Grant projects (total of 10 and 13 respectively at end of fiscal year).
-  Training was provided to 17 high school teams registered for the 2005 AZ Envirothon competition.
-  75,000 Critters of Arizona books were purchased to provide one per every 4th-grade student in Arizona, correlating to the Living State Symbols of Arizona educational program.
-  *Wildlife News*, a weekly news release that is e-mailed and faxed to more than 450 media outlets, including radio, television, newspapers, and national publications, significantly expanding our media coverage.

The Publications Section staff produced several publications in FY2005. A new publication, "A Field Guide: Amphibians and Reptiles of Maricopa County", was created in conjunction with

Arizona State University. About 5,900 books were printed and so far almost 2,600 books have sold. Department staff helped produce the Heritage Program brochure. Two thousand brochures were printed and distributed to Legislators and other interested parties. The Department produced the magazine, *Arizona Wildlife Views*, and increased total circulation through advertising and marketing of the publication. The distribution of 169,500 copies of the magazine reached an estimated 423,750 readers, including all state legislators. Distribution was accomplished through paid subscription services and through free distribution at the state fair, educational workshops and public school libraries. There were 16 Heritage-related articles printed during FY 2005, which covered a broad spectrum of subjects such as California Condors, Leopard Frogs, Coal Mine Canyon Gila topminnow and the Wolf Reintroduction Project.

Program personnel continued to be involved in developing and planning program facilities and sites with inter and intra-agency cooperative groups. Specific actions included: a current use contract continued for the Wildlife Building; and a new exhibit ("Top This: 10 Arizona Fishing Records") was developed. By working with three AGFD hatcheries (Tonto, Canyon Creek, Page Springs) and the Lake Pleasant Visitor Center, four "Top This" fishing record exhibits were replicated from the existing display at the Wildlife Building.

The Department produced a 13-week television series, which aired on the statewide PBS network and cable systems. The *Arizona Wildlife Views* Television Show production staff received several awards in FY2005 including:

- Outdoor Writers Association Awards
 - *Natural History Category* - First Place "Legends of the Owl"
 - *Conservation / Environment Category* - Second Place "Tres Rios"
 - *President's Choice Award* - Best Video of the Year "Legends of the Owl"
- Telly Awards
 - "Legends of the Owl"
 - "As Curious as a Raven" - The California Condor
- International Wildlife Film Festival
 - "They Almost got Away" - Merit Award for Conservation and a Finalist in the Government TV Category.
- Emmy Awards
 - "As Curious as a Raven" In the Program Element category.
 - "Legends of the Owl" in the lighting category.
 - "They Almost Got Away" in the Public Affairs category.

Two educational video programs were also created and released by the Department in FY2005: living with urban wildlife and how to catch crayfish. The urban wildlife video informs homeowners how to reduce conflicts with wildlife, while the crayfish video tells the story of the impact exotic crustaceans have on the environment, including native species of fish and amphibians.

WILDLIFE REHABILITATION EFFORTS

Department personnel assisted with various rehabilitation issues, such as assisting in the transfer of wildlife from wildlife service licensees to local rehabilitators. Many breeding animals were called in as nuisances and the calls were routed through Regional offices to rehabilitators. Orphaned or injured wildlife were routed from regional offices to rehabilitators. Personnel coordinated burrowing owl nesting and relocation issues with rehabilitators when owls were removed from sites of impending habitat loss and released to suitable – sometimes artificially developed – urban sites. Processing wildlife licenses, providing local education classes, and ongoing outreach on current issues also supported rehabilitation efforts.

Nine hundred and sixty-one animals were processed through the Adobe Wildlife Center in FY 2005. All reporting to the USFWS listing each animal handled, date and location of acquisition, and final disposition was completed as required. A list serve was created to disseminate information to all wildlife rehabilitators on a need-to-know basis. Record retention was committed to an electronic format, for ease of record keeping and dissemination of critical information. A volunteer manual was completed and provided to every potential volunteer that successfully completed orientation and initial training. The center hosted a statewide biennial wildlife rehabilitation symposium for rehabilitators, offering a variety of classes correlating to continuing education credits necessary for license renewal. Necropsy classes were provided to both rehabilitators as well as collegiate classes on an as-requested basis.

ACCESS SUBPROGRAM

OVERVIEW:

Project information: Administrative work was conducted at the Arizona Game and Fish Department, Development Branch, 2221 West Greenway Road, Phoenix, Arizona 85023-4399; the Department's Regional Offices in Pinetop, Flagstaff, Kingman, Yuma, Tucson, and Mesa; and other statewide locations, as necessary. Fieldwork was conducted statewide.

Access project activity expenditures amounted to 4% of total Heritage Fund expenditures.

PROJECTS (Summary of Activities):

ACCESS PROJECT














LANDOWNER RELATIONS PROGRAM

Objectives: Administer the Heritage Access Programs (Heritage Access Grant-In-Aid, Landowner Respect Program, and the Adopt-A-Ranch program) to take a proactive role in establishing working relationships between the landowner/lessee, recreational user groups, land management agencies, and the Department and to react to specific problems or conflicts that arise. Inform and educate recreational users of public lands about the responsible use of public and privately held lands and access opportunities to those lands. Maintain the Access Database. Acquire and utilize current technology to facilitate and enhance all activities under the program.

Summary of Activities:

The Heritage Access project (Heritage Access Grant-In-Aid, Landowner Respect Program, and the Adopt-A-Ranch program) was administered through the Landowner Relations Program (LRP). The project focused on establishing working relationships between the landowner/lessee, recreational user groups, land management agencies, and the Department.

Featured Access Project Activities:

-  Babbitt Ranches: Continuation of a long-term access agreement in Flagstaff.
-  Alder Ranch: Short term access agreement in Tucson in exchange for installation of water delivery system.
-  Thurston Ranch: Short term access agreement in exchange for mowing of sagebrush in Kingman.
-  Boating access project: Completed a boater access project in the Flagstaff region.
-  Yolo Ranch Phase 2: Provide funding for second half of access agreement signed the previous fiscal year in Kingman. Work entailed road construction and repair.
-  O'Haco Ranch: Provided funds to a landowner to finalize water delivery system as part of long-term access agreement in the Pinetop area.
-  San Jose Ranch: Short term access agreement in Tucson in exchange for ranch improvement projects.
-  Ashhurst Lake: Funds provided to US Forest Service in the Flagstaff region to build a cable fence to exclude Off-Highway Vehicle travel into sensitive area.
-  7VT Ranch: Short term access agreement in Tucson in exchange for water delivery system.
-  Double U Ranch: Short term access agreement near Tucson in exchange for grassland restoration projects.
-  Emigrant Canyon: Purchase 10 year Right-Of-Way from Arizona State Land Department in Tucson for public access.
-  Turley Trail: Purchase 10 year Right-Of-Way from Arizona State Land Department for public access in the Tucson district.
-  Adopt-A-Ranch/ Respect: Fund the activities of the Adopt-A-Ranch and Respect Programs.

ADMINISTRATIVE AND SUPPORT SERVICES

OVERVIEW:

Project Information: Administrative work and support services were conducted at the Arizona Game and Fish Department, Development Branch, 2221 West Greenway Road, Phoenix, Arizona

85023-4399; the Department's Regional Offices in Pinetop, Flagstaff, Kingman, Yuma, Tucson, and Mesa; and other statewide locations, as necessary.

Objectives: Provide administrative oversight and support in the management and monitoring of the Heritage Fund.

Activities under this section include program administration providing planning, grant management, budget and audit accountability.

Planning

- Leadership in development of program and budget plans
- Eligibility and allowability of costs

Fund Administration

- Facilitate Heritage Public Advisory Committee
- Oversight
- Liaison of Heritage Fund

Grant Administration

- Request for Proposals
- Review and Evaluation
- Grant Award
- Monitor grants (activity/expenditures/deliverables)

Budget Administration

- Budget preparation and monitoring
- Financial and budget management reports

Administrative Support

- Human Resources/Personnel
- Information Systems/Technical support
- Accounting support (payroll, GL, accounts payable, accounts receivable)
- Procurement and Printing Support
- Information and Communication Support

**Appendix I: Habitat Evaluation and Protection (HEP) Document Review in FY2005
from page 15 of the Report to Legislature.**

FEDERAL AGENCIES	Total Documents Reviewed	Documents Commented On	% Commented On
U.S. Fish and Wildlife Service	524	17	3
U.S. Forest Service	77	21	30
Bureau of Land Management	64	9	14
U.S. Army Corps of Engineers	39	6	15
Department of Defense	15	6	40
Environmental Protection Agency	36	1	3
U.S. Bureau of Reclamation	21	9	43
Natural Resources Conservation Service	11	0	0
Federal Energy Regulatory Commission	10	0	0
IAFWA work on Federal Projects	2	2	100
WAFWA work on Federal Projects	3	3	100
Bureau of Indian Affairs	2	1	50
National Park Service	20	3	15
Other Federal Agencies	56	12	21
Total Federal Agency Documents	880	90	10%

STATE AGENCIES

Arizona State Land Department	359	314	87
Arizona Department of Environmental Quality	91	8	9
Arizona Department of Transportation	111	96	86
Arizona Department of Water Resources	6	0	0
Arizona Game and Fish Department	271	126	46
Other State Agencies	23	9	39

Total State Agency Documents	861	553	64
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OTHER AGENCIES AND PRIVATE GROUPS

Private Industry/Private General	29	6	21
Private Citizens	1	1	100
Private Consultants	718	691	96
Cities	144	28	19
Counties	57	26	46
Total Other Agency Documents	949	752	79
TOTAL FOR ALL COLUMNS	2690	1395	52

Appendix 2: Heritage Grants Awarded in FY2005

Sixteen Heritage Fund grants were awarded in FY2005. The awarded grants were announced at the May 2005 Arizona Game and Fish Commission Meeting. Total awarded funding was **\$342,160**, which became available in July 2005. The project period for these grants is three years. The projects are identified by Heritage funding-focus and location in Arizona, including pertinent County and Legislative District(s). Project information regarding the applicants, project contacts, awarded funding and applicant's project descriptions is as follows:

• Environmental Education Heritage Grants

Applicant: City of Tucson
Project Contact: Mr. David Modeer, City of Tucson, 310 W. Alameda, P.O. Box 27210, Tucson, AZ 85726-7210
Project: E06001, "Sweetwater Wetlands Educational Activity Book."
County: Pima **Legislative District/s:** 26
Dollars Awarded: \$10,000

The city of Tucson, water conservation department, is seeking funding from the Arizona Game and Fish Department Heritage Fund for the design layout and publication of a Sweetwater Wetlands Activity Book to enhance urban wildlife habitat and education of the Sweetwater Wetlands in the Tucson School District. The project will include middle school development of conservation and environmental education activities for use within the school district.

Applicant: Northern Arizona University
Project Contact: Ms. Wilma Ennenga, Northern Arizona University, Box 4130, Flagstaff, AZ 86011-4130
Project: E06002, "Ponderosa Pete."
County: Coconino **Legislative District/s:** 2
Dollars Awarded: \$10,000

In an effort to promote teaching ecological concepts to Arizona's school children, we propose the development and publication of Ponderosa Pete. This educational story book can be used by Flagstaff Unified School District teachers, community facilitators, educational outreach staff at the Arizona Game and Fish Department and the USDA Forest Service, public libraries, northern Arizona tribes, and other environmental education entities to teach children about the concepts of ecological restoration, wildlife habitat relationships, conservation, and sound land ethic. The Ecological Restoration Institute at Northern Arizona University would like to publish and distribute 2500 copies of this book to enhance learning on these important environmental issues.

Applicant: University of Arizona
Project Contact: Ms. Lee Anne Peters, University of Arizona, P.O. Box 210158, Tucson, AZ 85721

Project: E06004, "Project Wildlife- C.S.I."

County: Maricopa **Legislative District/s:** 25
Dollars Awarded: \$4,546

The project provides a 3 part educational presentation to an estimated 600 5th graders in Maricopa County. Part I Wildlife I.D Part II wildlife conservation featuring the benefits of hunting or harvesting wildlife, and part III- Firearm safety in the field and at home. Key strategies to benefiting these youth long term is the provision of a "Critters of Arizona " booklet, a bone box, and a gun safety pamphlet.

Applicant: Bureau of Land Management
Project Contact: Mr. Thomas Zale, Bureau of Land Management, 2555 East Gila Ridge Road, Yuma, AZ 85365

Project: E06005, "Mittry Lake Birding Kiosk."

County: Yuma **Legislative District/s:** 24
Dollars Awarded: \$3,345

The Yuma field office proposes to construct 4 birding kiosks in the Mittry Lake revegetation area. The kiosks will provide information about the local migratory birds and their habitat.

- **IIAPM Heritage Grants**

Applicant: Northern Arizona University
Project Contact: Ms. Wilma Ennenga, Northern Arizona University, Box 4130, Flagstaff, AZ 86011-4130

Project: I06001, "Cascading Consequences-A video Documentary of the Restoration of Fossil Creek."

County: Coconino **Legislative District/s:** 1
Dollars Awarded: \$28,000

This project will produce an educational documentary that capitalizes on the upcoming restoration of Fossil Creek, Arizona where a large hydropower dam will be decommissioned in March 2005. The documentary speaks to the complex environmental issues that inform large restoration projects. This program will take viewers into the field with biologists, geologists, restoration manager, and other scientists. The video will be distributed for educational purposes and will be augmented with a draft teacher's guide.

Applicant: University of Arizona
Project Contact: Dr. Richard Haney, Jr., University of Arizona, 888 Euclid Ave.; P. O. Box 210158, Tucson, AZ 85721

Project: I06004, "Optimizing Control Methods for Northern Crayfish (Orconectes Virilis)."

County: Pima **Legislative District/s:** 27
Dollars Awarded: \$84,616

Invasive crayfish are seriously threatening freshwater biodiversity across Arizona. We propose to examine specific life history characteristics and tolerances of the northern crayfish (*Orconectes virilis*) in Arizona using field and laboratory experiments. These characteristics would then be used in a model to identify susceptible life stages that would be the most promising to target for control. We expect to produce a report outlining life history characteristics of the northern crayfish in Arizona, a life history model, and a matrix of potential control methodologies developed from the model that would maximize efficiency of crayfish control.

Applicant: Arizona State University
Project Contact: Ms. Vicki Krell, Arizona State University, Box 873503, Tempe, AZ 85287-3503
Project: I06006, "Amphibian Disease and Pathogen Pollution."

County: Maricopa **Legislative District/s:** 17
Dollars Awarded: \$63,959

This project will address three questions central to understanding pathogen movement in Arizona's amphibian populations: 1) Can ATV switch hosts among tiger salamander, including *A. t. stebbinsi*, *A. t. mavortium* and the endangered, *Ambystoma californiense*? 2) How are salamanders moved through commerce? 3) How important is commerce as a cause of pathogen pollution (anthropogenic movement of pathogens)?

Applicant: Arizona State University
Project Contact: Ms. Vicki Krell, Arizona State University, Box 873503, Tempe, AZ 85287-3503
Project: I06008, "Conservation Genetics of Arizona Talussnails."

County: Maricopa **Legislative District/s:** 17
Dollars Awarded: \$60,694

The objective of this proposal is to examine the population genetics and taxonomic validity of the Pinaleno, San Xavier, and Wet Canyon talussnails and related taxa, using mitochondrial and nuclear gene sequences. Talussnails examined using molecular genetic approaches will also be examined for their morphology to determine consistency of these approaches. Additional information about habitat requirements and effective population size will also result, allowing for more effective management strategies.

- **Public Access Heritage Grants**

Applicant: United States Forest Service
Project Contact: Mr. Kent Ellett, USDA, Apache-Sitgreaves National Forests, HC1 Box 733, Duncan, AZ 85534
Project: P06002, "Green Gate Public Access."
County: Greenlee **Legislative District/s:** 5
Dollars Awarded: \$10,400

Green metal easy opening gates will be installed along high traffic routes in Unit 27 - Clifton NF Ranger District to make access more accessible for the public than the existing barbwire gates. These gates are user friendly, safer and convenient for hunters, hikers, riding groups, ranchers and agency personnel.

• **Schoolyard Heritage Grants**

Applicant: Mohave Community College
Project Contact: Mr. William Lovejoy, Mohave Community College, 1971 Jagerson Ave., Kingman, AZ 86401
Project: S06001, "Aquatic Wildlife Refuge and Awareness Area."
County: Mohave **Legislative District/s:** 3
Dollars Awarded: \$10,000

To create a unique habitat and awareness area within a school setting to encourage learners of all ages to have awareness and appreciation for Arizona's wildlife species by re-vitalizing the Micro-Riparian Habitat Heritage Project to provide refuge to Native Aquatic Animal Species within a carefully designed and controlled environment which necessitates the animals' habitat requirements. The project will include terrestrial native riparian plant species to attract and support various other wildlife such as small mammals, reptiles, insects and birds including migratory species with habitat components such as food, water and shelter. The addition of study and observation areas to the project will afford opportunities for an outdoor laboratory to study aquatic ecosystems.

Applicant: Yavapai College
Project Contact: Mr. Paul Kessel, Yavapai College, 601 Black Hills Drive, Clarkdale, AZ 86324
Project: S06002, "Verde Campus Nature Trail."
County: Yavapai **Legislative District/s:** 1
Dollars Awarded: \$9,986

The scope of this proposal encompasses the creation of a nature trail on the Verde campus of Yavapai College in Clarkdale AZ, to be utilized by local schools and community members. The goal of this trail is for users to become more familiar with the native plants and animals in their area. The trail length is approximately 1.5 miles. The monies being requested from the heritage fund are for the purchase of interpretive signs to educate visitors about wildlife that is commonly seen along the trail and which residents are likely to come in contact with throughout Yavapai County, and surrounding areas. Additional information on other mammals, birds, and reptiles will be available via printed pamphlets, and from volunteers who will lead nature walks on the trail. The overwhelming majority of the development of this trail will be borne by Yavapai College and other funding sources including volunteer and student groups.

Applicant: Hermosa Montessori
Project Contact: Ms. Sheila Stolov, Hermosa Montessori, 12051 E. Ft. Lowell, Tucson, AZ 85749
Project: S06003, "Hermosa Schoolyard Pond."

County: Pima **Legislative District/s:** 30
Dollars Awarded: \$9,997

The Hermosa schoolyard pond will house native fish and provide a riparian area for hands-on study used by students in K-8 at Hermosa Montessori Charter School.

Applicant: Tucson Unified School District
Project Contact: Ms. Patricia Lopez, Tucson Unified School District, 1010 E. 10 Street, Tucson, AZ 85717

Project: S06004, "The handicap Accessible Interpretive Trail."

County: Pima **Legislative District/s:** 27
Dollars Awarded: \$8,016

The handicap Accessible Trail will be the most important component of Cooper ESC's programs for TUSD students, teachers, and parents with physical disabilities. The trail will allow Cooper ESC staff to provide an authentic Sonoran Desert experience, and integral part of our program, to this population. It will provide access to a living desert environment where students, teachers and parents can observe and do lessons and activities related to outdoor learning. This trail will be an ideal place for implementing quality experiences in wildlife and environmental education.

Applicant: Kyrene School District
Project Contact: Dr. Georgia Shimkus, Kyrene School District, 8700 S. Kyrene Rd., Tempe, AZ 85284

Project: S06005, "Heritage Habitat Garden - Monte Vista Elementary."

County: Maricopa **Legislative District/s:** 20
Dollars Awarded: \$10,000

We are proposing to construct a Hummingbird habitat garden which will include a natural pond area and native plants. This garden will be designed to attract Hummingbirds mostly, but will also encourage other wildlife to visit such as rabbits, squirrels, lizards, insects and other native birds. We hope by providing an outdoor classroom in which to learn we will motivate and encourage our students to appreciate Arizona wildlife and learn to take an active role with regards to environmental conservation.

• **Urban Heritage Grants**

Applicant: Mohave Community College
Project Contact: Mr. William Lovejoy, Mohave Community College, 1971 Jagerson Ave., Kingman, AZ 86401

Project: U06001, "Habitat Interpretive Area."

County: Mohave **Legislative District/s:** 3
Dollars Awarded: \$9,100

To revitalize, restore and improve the interpretive and plant identification signs within the existing Wildlife Garden Arboretum and Aquatic Habitat which is uniquely designed to provide refuge for various wildlife within an urban setting where learners of all ages can observe, study and be provided with information about the animals and their habitats and how to create such environments in their backyards.

Applicant: Pima County
Project Contact: Mr. Rafael Payan, Pima County, 1204 W. Silverlake Rd., Tucson, AZ 85713
Project: U06003, "Agua Caliente Park Interpretive Signs."
County: Pima **Legislative District/s:** 27
Dollars Awarded: \$9,500

The distribution of a brochure and installation of two porcelain interpretive signs, discouraging the feeding of native wildlife and the releasing of exotic and domestic animals into the wild.

Applicant: Arizona State University
Project Contact: Mr. Ben Fasano, Arizona State University, Office of Research and Sponsored Projects, P.O. Box 873503, Tempe, AZ 85287-3503
Project: U05009, Constructed Sonoran Riparian Habitat
County: Maricopa **Legislative District/s:** 22
Dollars Awarded: \$12,957

A riparian zone containing native Sonoran Desert plants, nested in a storm drain, will be constructed within a golf course at Arizona State University East (ASU East). The riparian area will create a unique habitat at this urban site. Applied Biological Sciences students at ASU East will use the riparian community as a living laboratory. The riparian area will contain a pathway for visitors to view the plants and animals using the site.

Applicant: University of Arizona
Project Contact: Dr. Richard Powell, University of Arizona, Sponsored Projects Services, 1401 E University Boulevard, Tucson, AZ 85721
Project: U05011, Conservation of Tucson's Riparian Herpetofauna
County: Pima **Legislative District/s:** 26,27,28,29
Dollars Awarded: \$26,970

Tucson's majority riparian corridors originally supported one of North America's richest herpetofaunas. Among the most striking remnants are box turtles, 6 summer-breeding frogs and toads, and natural communities in Sabino Canyon, West Branch of Santa Cruz River, and Tanque Verde Bosque. In context of a long-term framework for urban ecological restoration, this proposal will initiate (1) targeted surveys for breeding anurans, (2) mosquito control studies associated with anuran breeding, (3) survey and genetic study of box turtles, and (4) completion of environmental histories for the herpetofaunas at key sites.

Applicant: University of Arizona

Project Contact: Ms. Lee Anne Peters, University of Arizona, Office of Research
and Contract Analysis, P.O. Box 210158, Tucson, AZ 85721
Project: U05012, Bat Response to Habitat Enhancement in an Urban
Wildlife Interface
County: Pima **Legislative District/s:** 30
Dollars Awarded: \$31,320

This study is designated to monitor the response of bats to a fire altered resource both before and after storm runoff sediments are removed from historic pools providing habitat enhancement for both bats and fish. Sabino Canyon is a popular recreational area that, due to its proximity to Tucson AZ receives over 1.5 million visitors/yr. This high visitation rate to a fragile riparian environment has the potential to negatively impact resident species. Information gained will enable land managers to make informed decisions.